

Owsley provides the most comprehensive paleopathological coverage in the volume, including six photographs. Owsley and Jantz provide a standardization methodology for data collection and include tables from two sites to illustrate their coding system and reporting procedures. While this chapter predates the volume by Buikstra and Ubelaker (1994) of recommended standards of data collection, the paleopathology coding system presented here is more detailed and could provide a supplementary, "in-house" database for large collections.

Chapter 6 by Stodder provides the hallmark case of what the volume is trying to achieve: a synthesis of broadly regional osteological data with an eye toward addressing pertinent biocultural problems by analyzing markers of adaptive success. Stodder describes past bioarchaeological work in the Basin-Range region that encompasses parts of Colorado, New Mexico, and Trans-Pecos Texas, including seminal works by Hrdlika and Hooton. To diagnose subsistence strategy types and adaptive success, Stodder includes some life table information, stature data from several components, and evidence of interpersonal violence and cannibalism. Because of the temporal depth and wide spatial range analyzed, Stodder is careful not to emphasize broad trends but calls for continued subregional investigation of health- and diet-related issues.

Though this volume was published in 1999, all of the chapters were originally published in separate reports between 1988–1990. The chapters were not reedited for this volume and, except for Chapter 4, lack revisions that include new data or fresh reflections on bioarchaeological issues that

are pertinent today. The book would be strengthened by an editorial overview that ties together the underlying theoretical assumptions, defines the cultural-temporal framework of the macroregion, states the basis upon which regions were divided (e.g., geographic, cultural, or ecological), and provides a synthetic statement of work to date (1999). Further, while some tables are immediately amenable to cross-cultural and extraregional comparisons (e.g., the distribution of data by temporal and cultural affiliations), data distributed by "adaptive type" are less informative because the types discussed are inconsistent between chapters. The editor would be well-served to provide definitions as well as tables of the adaptive types and subregional cultural chronologies to help synthesize the data from each chapter and render them comparable.

These problems do not detract from the fact that this volume is loaded with data of significant temporal depth that will be useful for bioarchaeologists who seek comparative samples other than Moundville or Dickson Mounds, the quintessential yet often inappropriate alternatives.

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DIGGING FOR PATHOGENS. ANCIENT EMERGING DISEASES: THEIR EVOLUTIONARY, ANTHROPOLOGICAL AND ARCHAEOLOGICAL CONTEXT. Edited by Charles L. Greenblatt. Rehovot, Israel: Balaban Publishers. 1998. 400 pp. ISBN 0-86689-053-X. \$49.00 (paper).

This book considers infectious diseases and focuses on new techniques to detect bio-

molecular evidence for disease. The emergence of new infectious diseases and the reemergence of old ones raise serious problems for human society. We know very little about evolutionary events that enable pathogens to invade new hosts or to become more successful in their existing hosts. We can sometimes trace these events by molecular phylogenetics, but the results are

rarely clear-cut. The chapters in this book describe a number of novel approaches which could contribute to our understanding of emerging diseases and their evolution, with several authors proposing scenarios involving sequence analysis of pathogen DNA from ancient remains. The book is the first publication of the Center for the Study of Emerging Diseases, established in Jerusalem in 1996, and the results of a symposium held in May 1997 of people from a variety of backgrounds, including molecular biologists, physical anthropologists, biologists, immunologists, and biochemists.

This book is divided into four sections, although the fourth is only 10 pages in length. Part 1 ("The Evolutionary Context") contains six chapters ranging from the evolution of sickness to the microbiology of amber. The Preface to the book states that interchange between different disciplines is essential in research. This is an excellent notion but one that requires restraint. Reading the book, one is never quite sure where the facts end and the speculation begins. Raul Cano's intriguing and thought-provoking chapter in Part 1 provides a case in point. This chapter starts on solid ground with descriptions of DNA found in amber specimens, including a comment that the results have proved irreproducible, and then moves on to discuss the survival of 40 million year old living bacilli—a controversial but apparently replicable discovery—before outlining a scheme whereby the symbiotic bacilli in ancient bees became the human pathogen *B. anthracis*. Somewhere in the chapter we went from fact to speculation, but exactly where is not clear.

Part 2 focuses on the anthropological and archaeological context with another six chapters. Bruce Rothschild's chapter ("Wellness and Disease: the Pliopleistocene and Holocene Record") commendably focuses on looking at disease at a population rather than an individual level, and has some interesting information on specific disease processes and the evidence for them. Curiously, though, he states in his abstract that "most animals (including humans) were healthy" (p. 147) and that "socioeconomic status does not bias skeletal populations" (p. 148); both these statements need more

thought with respect to "the osteological paradox" of Wood et al. (1992). Also, in Table 3 (and Table 2 is difficult to interpret), it is unclear whether the frequency figures refer to individuals, or number of bones, affected. Douglas Ubelaker's chapter on "Ancient Disease in Anthropological Context" is a very useful and clear overview of the issues in understanding disease in past populations, and the chapter by Patricia Smith and Liora Horwitz on "Culture, Environment and Disease in the Southern Levant" provides a good study linking the skeletal and cultural data.

Part 3 is called "Digging for Pathogens" and contains four chapters. The section starts with the very sublime contribution from Geoffrey Eglinton, who gives a clear and well-argued description of the preservation potential of different types of biomolecules, emphasizing the particular problems associated with the recovery and study of ancient DNA (something which is generally ignored elsewhere in the book). Clearly, from this chapter, Eglinton has doubts about whether ancient DNA, although attracting a curious fascination, is yet answering fundamental questions in the study of palaeopathology. But two chapters on, we are reading about eight major collaborative ventures set up as a result of the symposium, each one using ancient DNA to tackle a fundamental question (we await the publication of these potentially interesting results). Is this still sublime?

The book has no index, and has misprints and grammatical problems, with errors and omissions in the bibliographies of a number of chapters; some chapters needed more clearly defined goals and structure. The illustrations are generally well-produced, and the cartoons at the beginning of each section are very good likenesses of the authors. There are, however, some problems with the text as highlighted above.

Reading this book, especially Part 3, we are struck by the disparity between the two ways of doing ancient DNA research. One way involves an initial attempt to solve the problems concerning poor recovery, partial degradation, and modern contamination highlighted by Eglinton, which means that the exciting questions are postponed for a

few years. The second way is to dive in head-first and not worry about the problems. We wish good luck to those who want to take the second approach, but we worry that without having first done the boring groundwork it might be a very long time before the scientific community accepts that biomolecular methods of diagnosis in palaeopathology represent a major advance.

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